

the places where the Images of the blew and red parts of the coloured Paper appeared most distinct. Those places I easily knew by the Images of the black Lines which I had made by winding the Silk about the Paper. For the Images of those fine and slender Lines (which by reason of their blackness were like Shadows on the Colours) were confused and scarce visible, unless when the Colours on either side of each Line were terminated most distinctly. Noting therefore, as diligently as I could, the places where the Images of the red and blew halves of the coloured Paper appeared most distinct, I found that where the red half of the Paper appeared distinct, the blew half appeared confused, so that the black Lines drawn upon it could scarce be seen; and on the contrary where the blew half appeared most distinct the red half appeared confused, so that the black Lines upon it were scarce visible. And between the two places where these Images appeared distinct there was the distance of an Inch and a half: the distance of the white Paper from the Lens, when the Image of the red half of the coloured Paper appeared most distinct, being greater by an Inch and an half than the distance of the same white Paper from the Lens when the Image of the blew half appeared most distinct. In like Incidences therefore of the blew and red upon the Lens, the blew was refracted more by the Lens than the red, so as to converge sooner by an Inch and an half, and therefore is more refrangible.

Fig. 12. *Illustration.* In the Twelfth Figure, DE signifies the coloured Paper, DG the blew half, FE the red half, MN the Lens, HJ the white Paper in that place where the red half with its black Lines appeared distinct, and *hi* the same Paper in that place where the blew half appeared distinct. The place *hi* was nearer to the Lens MN than the place HJ by an Inch and an half.

*Scholium.*

*Scholium.* The same things succeed notwithstanding that some of the Circumstances be varied: as in the first Experiment when the Prism and Paper are any ways inclined to the Horizon, and in both when coloured Lines are drawn upon very black Paper. But in the Description of these Experiments, I have set down such Circumstances by which either the Phænomenon might be rendred more conspicuous, or a Novice might more easily try them, or by which I did try them only. The same thing I have often done in the following Experiments: Concerning all which this one Admonition may suffice. Now from these Experiments it follows not that all the Light of the blew is more Refrangible than all the Light of the red; For both Lights are mixed of Rays differently Refrangible, So that in the red there are some Rays not less Refrangible than those of the blew, and in the blew there are some Rays not more Refrangible than those of the red; But these Rays in Proportion to the whole Light are but few, and serve to diminish the Event of the Experiment, but are not able to destroy it. For if the red and blew Colours were more dilute and weak, the distance of the Images would be less than an Inch and an half; and if they were more intense and full, that distance would be greater, as will appear hereafter. These Experiments may suffice for the Colours of Natural Bodies. For in the Colours made by the Refraction of Prisms this Proposition will appear by the Experiments which are now to follow in the next Proposition.

C

P R O P.